# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/743,430 | 12/23/2003 | Frederick Douglis | 3555-0130P | 7537 |

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

| EXAMINER |
|---|
| GEREZGIHER, YEMANE M |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2144 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 08/31/2007 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/743,430 | DOUGLIS ET AL. |
| | Examiner | Art Unit | |
| | Yemane M. Gerezgiher | 2144 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on 12|23|03.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1.    This application has been examined. Claims 1-20 are pending.

### *Claim Rejections - 35 USC § 103*

2.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by
> the manner in which the invention was made.

3.    Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Day (U.S. Patent Number 7,185,052) in view of Freedman (U.S. Patent

Number 7,007,089).

As per claim 1: Day disclosed a system for delivering an integrated web

hosting and content distribution affording predetermined service performance

levels [Abstract, Column 2, Lines 25-27, distributing content based on a

predefined capacity reservation... and Column 3, Lines 18-22, ...based on the

load/availability of each server...], comprising: a first web hosting server for a

web site; at least one content distribution network [Column 3, Lines 15-36,

plurality of Content Distribution Networks (CDNs) and an original on-net host

server(s)]; a redirection means for receiving DNS requests from access devices

through a local DNS [Column 2, Lines 25-29 and Column 5, Lines 39-46]; and

monitoring means for monitoring operational performance parameters of the

first web host and the at least one content distribution network [Column 2,

Lines 25-36 and Column 3, Lines 58-60], the redirection means and the monitoring means being under the operation control of a primary service provider [Column 5, Lines 9-13 &39-49, a combined redirection utilizing a combined Meta CDN, the Meta CDN utilizing a Meta CDN DNS (MCD) server within its own (primary) CDN], wherein, based on signals from the monitoring means, the redirection means of the primary service provider returns a record to the local DNS [Column 8, Lines 18-20, ... the authoritative DNS server returning A record to the local DNS] indicating whether or not the first web hosting server is capable of meeting a predetermined operational performance threshold, and the redirection means sending the local DNS a record including an IP address of the first web hosting server when a performance value is below a predetermined operational performance threshold [Column 2, Lines 30-36, the local DNS transmitting a request to the MCD (the authoritative DNS) and the MCD checking load among it's own CDN servers and capable of handling returning A record to the local DNS, where the local DNS forwards the A record to the requesting client enabling to directly access the server/host accordingly], and the redirection means sending the local DNS a different record causing the local DNS to make a subsequent DNS request to a DNS of the at least one content distribution network when the performance value is equal to or above the predetermined operational performance threshold [Fig. 6 (also disclosed below), Column 3, Lines 18-22 and Column 5, Lines 39-67, redirecting requests in accordance with load/availability of the hosting server and plurality

of CDNs, by first receiving a request from a client via a local DNS and going

through a Meta DNS server (MCD), which is the authoritative name server and

the authoritative name server redirecting/load-balancing based on a predefined
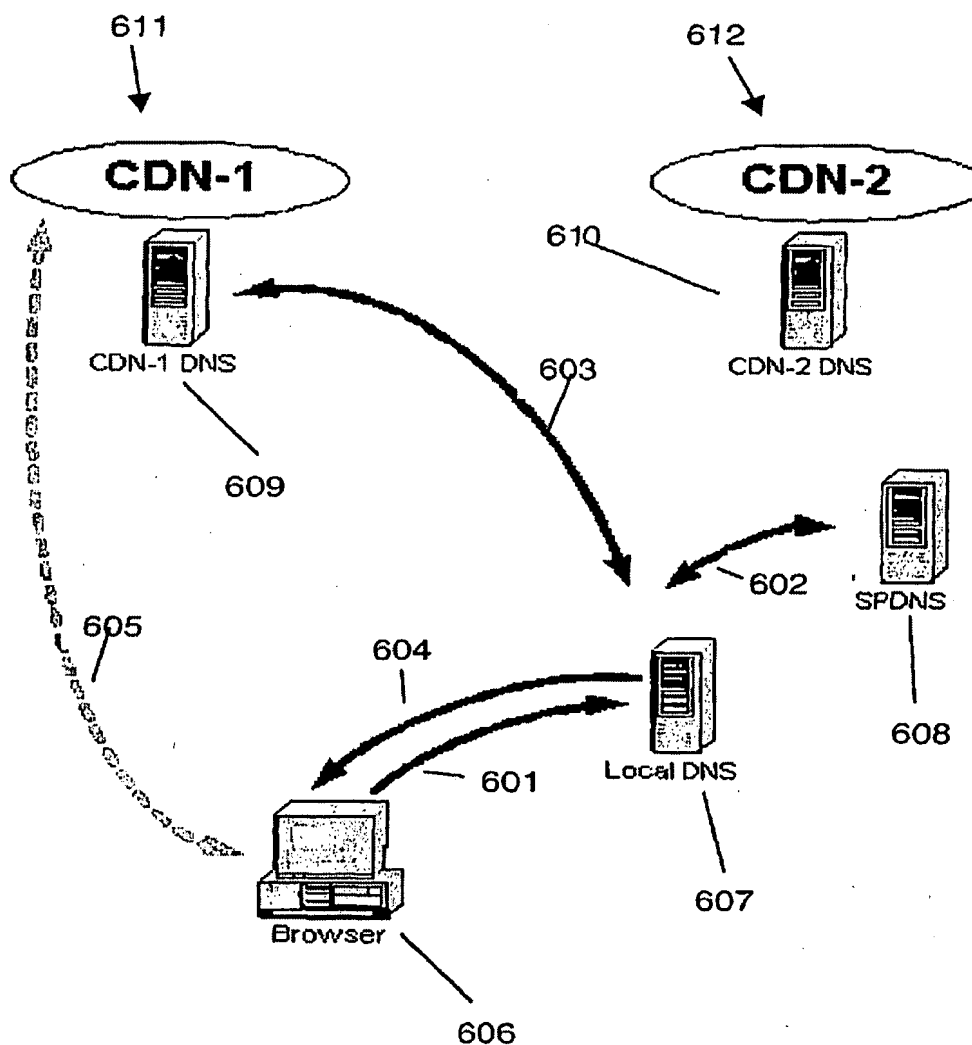
performances of the content providers].



**Fig. 6**

Day substantially disclosed the invention as claimed. However, Day was

silent about the redirecting taking place based on performance value being

below, or greater or equal to a predetermined threshold. However, in the same

filed of invention, Freedman disclosed redirecting based on performance value

being below, and/or greater or equal to a predetermined threshold (see

Freedman Abstract, and Column 3, Line 53 through Column 4, Line 7, Fig. 2,

Column 4, Lines 5-57, Column 6, Lines 50-55 and Column 10, Lines 16-22).

Therefore, it is respectfully submitted that it would have been obvious to one of

ordinary skill in the art at the time the invention was made to take the

teachings of Freedman related to redirecting DNS requests to CDN regions

based on predetermined threshold and have modified the teachings of Day in

order to guarantee dependable quality of service (see Freedman, Column 3,

Lines 6-7).

As per claim 2: Day disclosed that the first web hosting server and one of

the at least one content distribution networks are operated under the control of

the primary service provider [Column 2, Lines 30-36, the local DNS

transmitting a request to the MCD (the authoritative DNS) and the MCD

checking load among it's own CDN].

As per claim 3: Day disclosed that the first web hosting server and the at

least one content distribution networks are monitored by, but not operated by,

the primary service provider [Column 1, Lines 60-67, Figs. 5-6, and Column 2,

Lines 18-36, plurality of independent CDNs their performance monitored by

the authoritative DNS (MCD)].

As per claim 4: Day disclosed that the redirection means includes a redirection DNS [Column 5, Lines 39-52, a redirecting authoritative DNS].

As per claim 5: Day disclosed that the redirection means provides application level redirection [Note: DNS by design operates on the application level of standard logical communication layers, thus redirecting is inherently happening at the application level].

As per claim 6: Day disclosed that the monitoring means of the primary service provider receives detailed capacity and health statistics of any of the at least one CDN under the operational control of the primary service provider, and receives aggregate capacity and health statistics from others of the at least-one CDN not under the operational control of the primary service provider [Fig. 6, Column 2, Lines 30-36, Column 3, Lines 18-22 and Column 5, Lines 39-67, the authoritative DNS determining load information of servers associated within its own CDN and plurality of other CDNs].

As per claim 7: Day disclosed that the operational performance threshold is response time [Column 3, Lines 15-20 & 56-60, a latency as the predefined performance metrics of the host(s) and CDNs in communication with the requesting client].

As per claim 8: Day disclosed an integrated provisioning system [Column 5, Lines 9-13 &39-49, a combined redirection utilizing a combined Meta CDN, the Meta CDN utilizing a Meta CDN DNS (MCD) server managing name resolving of all domains]

As per claim 9: Day disclosed a customer management interface [Column 6, Lines 54-63, operator interface...].

As per claim 10: Day disclosed the system for delivering an integrated service according to claim 1, further comprising an integrated customer billing and reporting system [Column 6, Line 64 through Column 7, Line 6, integrated billing].

As per claim 11: Day disclosed a method for delivering an integrated web hosting and content distribution service which affords predetermined operational performance levels [Abstract, Column 2, Lines 25-27, distributing content based on a predefined capacity reservation... and Column 3, Lines 18-22, ...based on the load/availability of each server...], comprising the steps of: providing a first web hosting server for a web site, at least one content distribution network [Column 3, Lines 15-36, plurality of Content Distribution Networks (CDNs) and an original on-net host server(s)], redirection means [Column 2, Lines 25-29 and Column 5, Lines 39-46], and monitoring means, wherein at least the redirection means and the monitoring means are under operation control of a primary service provider[Column 5, Lines 9-13 &39-49, a combined redirection utilizing a combined Meta CDN, the Meta CDN utilizing a Meta CDN DNS (MCD) server within its own (primary) CDN]; receiving a DNS requests from access devices through a local DNS [Fig. 6, DNS request from a client terminal # 606 via a local DNS # 607]; monitoring operational performance parameters of a first web host and at least one content

distribution network, wherein, based on signals from the monitoring means, the redirection means of the primary service provider returning a record to the local DNS indicating whether or not the first web hosting server is capable of meeting a predetermined operational performance threshold, the record including an IP address of the first web hosting server when a performance value is below a predetermined operational performance threshold[Column 2, Lines 30-36, the local DNS transmitting a request to the MCD (the authoritative DNS) and the MCD checking load among it's own CDN servers and capable of handling returning A record to the local DNS, where the local DNS forwards the A record to the requesting client enabling the client to directly access the server/host within an optimal CDN ], and the redirection means sending the local DNS a different record causing the local DNS to make a subsequent DNS request to a DNS of the at least one content distribution network when the performance value is equal to or above the predetermined operational performance threshold [Fig. 6 (also disclosed below), Column 3, Lines 18-22 and Column 5, Lines 39-67, redirecting requests in accordance with load/availability of the hosting server and plurality of CDNs, by first receiving a request from a client via a local DNS and going through a Meta DNS server (MCD), which is the authoritative name server and the authoritative name server redirecting/load-balancing based on a predefined performances of the content providers].

Day substantially disclosed the invention as claimed. However, Day was silent about the redirecting taking place based on performance value being below, or greater or equal to a predetermined threshold. However, in the same filed of invention, Freedman disclosed redirecting based on performance value being below, and/or greater or equal to a predetermined threshold (see Freedman Abstract, and Column 3, Line 53 through Column 4, Line 7, Fig. 2, Column 4, Lines 5-57, Column 6, Lines 50-55 and Column 10, Lines 16-22). Therefore, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Freedman related to redirecting DNS requests to CDN regions based on predetermined threshold and have modified the teachings of Day in order to guarantee dependable quality of service (see Freedman, Column 3, Lines 6-7).

As per claim 12: Day disclosed operating the first web hosting server and one of the at least one content distribution networks under the control of the primary service provider [Column 2, Lines 30-36, the local DNS transmitting a request to the MCD (the authoritative DNS) and the MCD checking load among it's own CDN].

As per claim 13: Day disclosed an integrated service according to claim 11, further comprising the step of: monitoring the first web hosting server and one of the at least one content distribution network by the primary service provider, but not operating the first web hosting server and any of the at least

one content distribution networks under the control of the primary service provider [Column 1, Lines 60-67, Figs. 5-6, and Column 2, Lines 18-36, plurality of independent CDNs their performance monitored by the authoritative DNS (MCD)].

As per claim 14: Day disclosed that the redirection means includes a redirection DNS [Column 5, Lines 39-52, a redirecting authoritative DNS].

As per claim 15:Day disclosed that the redirection means provides application level redirection [Note: DNS does operates on the application level of logical layers, thus redirecting is inherently happening at the application level].

As per claim 16: Day disclosed receiving detailed capacity and health statistics of any of the at least one CDN under the operational control of the primary service provider, and receiving only aggregate capacity and health statistics from others of the at least one CDN not under the operational control of the primary service provider [Fig. 6, Column 2, Lines 30-36, Column 3, Lines 18-22 and Column 5, Lines 39-67, the authoritative DNS determining load information of servers associated within its own CDN and plurality of other CDNs].

As per claim 17: Day disclosed that the operational performance threshold is available bandwidth [Column 3, Lines 15-20 & 56-60, resource load of the plurality of CDNs].

As per claim 18: Day further disclosed an integrated provisioning system [Column 5, Lines 9-13 &39-49, a combined redirection utilizing a combined

Meta CDN, the Meta CDN utilizing a Meta CDN DNS (MCD) server managing name resolving of all domains].

As per claim 19: Day taught a customer management interface [Column 6, Lines 54-63, operator interface...].

As per claim20: Day further disclosed the step of providing integrated customer billing and reporting [Column 6, Line 64 through Column 7, Line 6, integrated billing report].

### *Conclusion*

4.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.    Barbir et al. (US 20030115283 A1) entitled: "Content request routing method"

b.    Swildens et al. (US 7225254 B1) entitled: "Performance computer network method"

c.    Skene et al. (US 20010052016 A1) entitled: "Method and system for balancing load distribution on a wide area network"

d.    Sundaram et al. (US 7136922 B2) entitled: "Method and system for providing on-demand content delivery for an origin server"

e.    Leighton et al. (US 7103645 B2) entitled: "Method and system for providing content delivery to a set of participating content providers"

f.    Ben-Shaul et al. (US 6976090 B2) entitled: "Differentiated content and application delivery via internet"
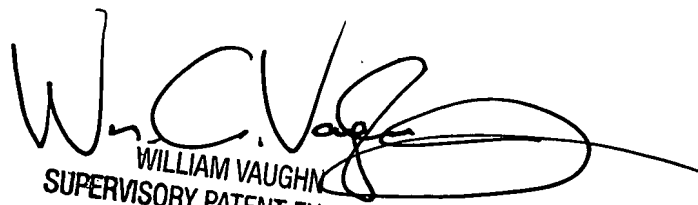
g.      Leighton et al. (US 6108703 A) entitled: "Global hosting system"

5.      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane M. Gerezgiher whose telephone number is (571) 272-3927. The examiner can normally be reached on 9:00 AM - 6:00 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Y. Gerezgiher
Patent Examiner
AU: 2144, TC: 2100

WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100